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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,399	09/18/2003	Michael S. Leung	P0298US-7	8955

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EXAMINER

LE, THAO X

ART UNIT PAPER NUMBER

2814

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/666,399

Applicant(s)

LEUNG ET AL.

Examiner

Thao X. Le

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 20-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-19 and 33-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 June 2006 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13-19, 33-34, and 36-38 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6329224 to Nguyen.

Regarding claims 13, 33 and 38, Nguyen discloses a method for coating a plurality of semiconductor device or LEDS, comprising: providing a mold with a formation cavity (space between top layer 110 and bottom layer 112), fig. 3, for holding a plurality of semiconductor devices 100, said formation cavity at least partially defined by upper 110 and lower 112 sections; mounting a plurality of semiconductor devices

100 within said mold formation cavity directly to at least one of said upper and lower sections, each of said semiconductor devices 100 or 393 being mounted separately within the cavity, fig. 10 or 11; injecting, col. 9 lines 22-25, or otherwise introducing curable coating material or matrix material (encapsulant), column 9 lines 30-35, into said mold to fill said mold formation cavity and at least partially cover said semiconductor devices 100 with coating material; and curing, or otherwise treating said coating material, fig. 4, so that said semiconductor devices 100 are at least partially embedded in said cured coating material; and removing said cured or treated coating material with said embedded semiconductor devices from said formation cavity, fig. 4.

Regarding claim 15, Nguyen discloses the method further comprising separating said embedded semiconductor devices 100 so that each is at least partially covered by a layer of said cured or treated coating material, fig. 4 or 12.

Regarding claims 16 and 36, Nguyen discloses the method wherein upper 302 and lower 386 sections provide opposing parallel surface, said semiconductor devices 393 arranged on one or both of said opposing surfaces, fig. 10.

Regarding claims 17 and 37, Nguyen discloses the method claim wherein said curing otherwise treating said semiconductor material comprises one of the methods from the group comprising heat curing, optical curing or room temperature curing, column 10 line 16.

Regarding claim 18, Nguyen discloses a method wherein the semiconductor devices are separated by dicing or scribe and break, col. 14 line 11.

Regarding claim 19, Nguyen discloses the method wherein the semiconductor devices are separated such that the layer of cured or otherwise treated coating material conforms to the shape of the semiconductor device, fig. 4.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over US6329224 to Nguyen in view of US 6252254 to Soules et al.

Regarding claim 35, Nguyen does not disclose the method wherein the matrix material contains light conversion particles.

However, Soules discloses the method wherein the LED, fig. 2, comprises a matrix material 15 contains light conversion particles, column 6 lines 15-25. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the encapsulating material contains light conversion particles teaching of Soules with Nguyen's capsulation material, because it would have created a specific LED characteristics such as color and color rendering index, as taught by Soules, column 2 line 27-32.

### ***Response to Arguments***

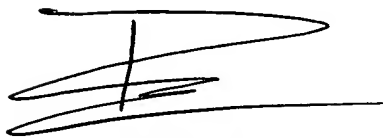
7. Applicant's arguments filed 28 June 2006 have been fully considered but they are not persuasive. The Applicant argues that Nguyen discloses different process wherein the devices are mounted to a flexible tape within an encapsulation fixture and are removed from the encapsulation fixture prior to curing the device; thus Nguyen fails to disclose "removing cured or treated coating material with embedded semiconductor devices from the cavity". This is not persuasive because as shown in fig 3 and 4 the semiconductors devices are being cover with encapsulant, curing in oven including the frame, col. 10 line 16, then the semiconductor devices removed from cavity. The encapsulation fixture (including the needle) is the part that is being used to inject the encapsulant into the cavity, which is removed prior to curing in the oven.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X. Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Thao X. Le', with a stylized, elongated horizontal stroke at the end.

Thao X. Le  
23 Aug. 2006